

103. The ILEC concern that providing any class of QoS above UBR would exhaust the capacity of the facilities, is extremely remote and upgrades are practically effortless. SBC even admits that the equipment can be engineered to any service level guarantee, “[i]f the money is there and the customers are willing to pay, we’re in the business of selling services.”³⁷ Any capacity expansion needed on the electronics would merely require upgrades to the electronics on both ends of the fiber, which can be done remotely due to the network management systems explained further in ¶¶ 116-118. To the extent that capacity on an OC-3 facility nears exhaust, the ILEC would merely upgrade the equipment to an OC-12 at the next standard system upgrade.

104. SBC has no apparent plans to offer CLECs the fiber subloop on an unbundled basis.³⁸ SBC does not consider to the fiber feeder portion of the loop as a subloop—instead SBC refers to it as “optical transport facility”, “fiber based connectivity from the RT to the SWC”, “DLE-DSL Feeder”. Moreover, SBC describes its loop qualification process for the Broadband Service in a way that suggests that the loops served over Project Pronto’s NGDLCs are not accessible to CLECs as unbundled local loops in any manner.³⁹

105. It is clear that CLECs currently cannot purchase unbundled loops to those customers that already receive fiber to the curb via SBC’s Apollo Project.⁴⁰ In 1994, SBC conducted a field test of broadband technology by installing eight remote terminals in Richardson, Texas. As part of the test, SBC removed from service the copper plant between the remote terminals and central offices. When SBC subsequently received requests for collocation space in those central offices from DSL providers, such as Rhythms, it never advised them that it

³⁷ FCC DLC Forum, Tr. 52, 1-2.

³⁸ Technical Reference Notice for Broadband Service Phase 1.

³⁹ Technical Reference Notice for Broadband Service Phase 1 at 18.

⁴⁰ *SBC Loop Qual CLEC Forum, List of Current Action Items*, Item 22 (rev. Sept. 12, 2000)(see Attachment F); see also Attachment G, Email on Apollo Project.

had retired the copper plant that terminated in those offices. Today, after having invested in equipment and collocation space necessary to provide service, DSL competitors requesting unbundled loops in Richardson, Texas uniformly receive a response that the customer is served by fiber to the curb.

106. CLECs need the option of purchasing the dark fiber as a subloop from the RT to the CO. Rhythms has found that, as an operational matter, purchasing, as a unbundled subloop, the dark fiber from the ILECs is difficult. For example, Verizon defines dark fiber as “an unlit continuous fiber optic strand with[in] an existing, in-place Telephone Company fiber optic cable sheath between the [CLEC’s] collocation arrangement in the Telephone Company’s central office, and the end user’s premises.”⁴¹ Verizon also explains that a strand is not considered continuous if splicing is required to provide fiber continuity between locations.⁴² This definition makes Verizon’s dark fiber offering virtually useless for CLECs. It means that CLECs cannot obtain the dark fiber UNE when a splice is required. In addition, restricting the offering to fiber between the central office and the end user’s premises means that dark fiber will be unavailable for connecting CLECs’ DSLAM equipment at remote terminals with their equipment collocated in the central office.

107. There is no valid technical reason for any restrictions on the dark fiber UNE. Access to dark fiber is technically feasible at any splice point. Most importantly, access to dark fiber is technically feasible at the remote terminal, where there is necessarily a splice point. Denying that access to data CLECs by defining dark fiber as extending only to the customer’s premises deprives them of the most useful aspect of the dark fiber offering. ILECs should be required to offer dark fiber segments between any splice points, and in particular to offer dark

⁴¹ Verizon Proposed NY P.S.C. Tariff 916, Section 5.20.1(A).

⁴² Verizon Proposed NY P.S.C. Tariff 916, Section 5.20.2.3.

fiber between the remote terminal and the CLEC's central office collocation space. However, other options must remain available, because lighting the fiber requires additional equipment be collocated, which is not feasible in the remote terminal collocation, as explained in

BROADBAND SERVICE OFFERING

108. Resale of the ILEC DSL DLC services also prohibits Rhythms from offering the services it intends to provide. SBC is planning to resell its ADSL service to CLECs in the NGDLC network architecture.⁴³ The manner in which SBC has configured the components for its "Broadband Service" and plans to price those components make this resale option inadequate to meet consumer demand for DSL services. A few examples demonstrate this point. SBC's very limiting decision to only provide the DSL of the type and speed that SBC (or its affiliate) currently offers and to prohibit CLECs from utilizing the full capabilities of the equipment, by refusing to provide PVPs over the fiber and giving competitors only UBRs for the QoS class.⁴⁴

109. Even after months of CLEC collaboratives, SBC's "Broadband Service" offering to remains overly restrictive, to the extent that SBC has been willing to provide information about its offering. For instance, SBC has limited its "Broadband Service" offering to ADSL service—the DSL service its affiliate has chosen to provide—though CLECs frequently offer a large variety of xDSL services, including ADSL, RADSL, SDSL, IDSL, HDSL2, SHDSL and VDSL. Additionally, SBC proposes only to provide a PVC over the fiber, as opposed to allowing CLECs to take advantage of the equipment's ability to use PVPs, which provide much more dedicated bandwidth.⁴⁵ The equipment for the "Broadband Service" only has a dual port backplane, as opposed to a multi-port backplane that allows CLECs to create and manage their

⁴³ Accessible Letter No. CLEC00-171, SBC Broadband Service – Interim Contract Language and Product Availability (Business Processes)(Sept. 6, 2000).

⁴⁴ Technical Reference Notice for Broadband Service Phase 1.

⁴⁵ *Pronto CLEC Collaborative Issues Log*, Item 9.15; SBC Broadband Service Product Overview.

own PVP back to the CLECs' equipment, either in the central office or at the CLECs' POP. SBC has also expressed in its CLEC collaborative meetings that in reality its offering will only include an unspecified bit rate (UBR), because it claims that CBR or VBR would decrease the capacity available on the fiber.⁴⁶ As far as remote terminal collocation, SBC continues to fail to recognize all possible collocation arrangements technically available.⁴⁷ Moreover, SBC has determined that "[t]here is no need for the CLECs to know in advance how various types of cards are deployed in the [NGDLC] RTs[.]" because SBC will assign the next available port on a card with the particular type of DSL as requested by the CLEC.⁴⁸

110. As a business matter, Rhythms does not want to be a reseller of SBC's or any other ILECs' DSL services, except as a last and final alternative. Rhythms must retain the ability to distinguish its DSL services from those services offered by the ILECs, as well as other DSL providers. If all DSL CLECs are forced to merely resell the ILECs' DSL services, there will be no service distinction and consumers will have no real choice of competitive services. Under a resale arrangement, CLECs cannot exercise any control over their networks, making it impossible to effectively differentiate their service through service level agreements or product alternatives. This lack of quality control and product choice is especially important in light of recent consumer frustration and backlash over the DSL services ILECs, like SBC, are providing.⁴⁹ Choosing between not offering service or reselling the ILECs' service is no choice. Facilities-based CLECs should have the option of obtaining an unbundled broadband loop UNE,

⁴⁶ *Pronto CLEC Collaborative Issues Log*, Item 9.4. ("This architecture only supports UBR and CBR today[.] . . . In regards to whether or not SBC will make a CBR product offering available, that is an issue currently before the FCC.") ; SBC Broadband Service Product Overview ("An Unspecified Bit Rate (UBR) PVC will be provided to CLECs in conjunction with the use of the OC-3c transport from the RT to the central office.") For further explanation of the QoS classes and their functionality, please refer to ¶¶ 90-92.

⁴⁷ *Pronto CLEC Friendly User Trial – Action Log*, Item 1 (Sept. 15, 2000).

⁴⁸ *SBC Pronto/CLEC Collaborative Issues Log*, Item 8.6.

which they would access at their collocation arrangements in the central office. If left solely with the options previously explained, Rhythms would not be able to offer DSL with its intended service parameters in a competitive manner.

COMPETITIVE PLACEMENT OF LINECARDS IN NGDLC

111. In a pro-competitive configuration, the copper feeder cable will terminate on a CLEC-owned line card with integrated DSLAM functionality that plugs into one of the channel banks in the DLC equipment located in the ILECs' remote terminals. This is the most efficient and effective point for technically feasible interconnection by CLECs in the ILECs' next generation architecture. The following options describe additional options for placing a card with DSLAM capabilities at the DLC located in the remote terminal:

- (1) The requesting carrier would place and own line cards in the DLC electronics at the remote terminal that would perform an integrated DSLAM and splitter function for the entire line-shared, line-split or stand-alone loop purchased by the requesting carrier. These line cards would enable both the DSL that travels over the distribution portion of the loop and the data stream that travels over the fiber feeder back to the central office. The ILEC would then provide the data signal to the requesting carrier via a virtual connection between the fiber feeder at the central office and the requesting carrier's collocation equipment. In this configuration, the requesting carrier would perform the maintenance for the line cards and would monitor and configure the cards (as well as the ATM connection) through a software interface with ILECs' equipment.
- (2) Option 2 is the same as Option 1, except the ILEC would install the cards and perform any necessary maintenance and repair work.
- (3) Option 3 is the same as Option 2, except that the ILEC or its affiliate would own the line cards at the remote terminal itself.

Each of these three options describes a form of the "plug and play" configuration, in which dual-purpose DSLAM/splitter line cards are used to bridge the gap between the copper distribution

⁴⁹ *DSL Users Sue over Slowness*, <<http://www.wired.com/news/business/0,1367,38278,00.html>> (Aug. 18, 2000) (see Attachment H).

cable and the fiber feeder. Attachment D illustrates the network architecture associated with these options for collocating DSLAMs at remote terminals for fiber-fed loops.

112. To ensure that the American consumers have access to the full ranges of competitive DSL-based services that are technically feasible, it is essential that DSL competitors be able to place their own DSLAM cards in the ILECs' remote terminals. ILECs may choose not to equip each of their DLCs with line cards that can provide the full technically feasible array of DSL-based services. Instead, the ILECs have the incentive to place cards to accommodate only the services that they, or their affiliates, intend to offer at each remote location. Regardless of whether the ILEC or its affiliates owns the cards today, the fact remains that the telco has chosen and purchased particular DLC DSL cards that benefit the telco's plans for provisioning advanced service. Absent a regulatory constraint, it is simply rational for the ILECs to evolve the local exchange networks in a manner that supports advanced services options that they or their affiliates plan to implement, while ignoring the needs of a competitive marketplace.

113. Rhythms has approached several vendors about the potential for purchasing line cards specifically designed for the service parameters that Rhythms intends to offer. The manufacturers that Rhythms spoke with include Cisco, Copper Mountain, and Paradyne. Without the ability to know the technical details of how to connect to the NGDLC and without sufficient forecasts that show the NGDLC deployment, DSL equipment manufacturers are hesitant to reverse engineer a DSL card for the NGDLC system. Manufacturers have plans to eventually make line cards available for all of the existing xDSL technologies, including ADSL,

RADSL, SDSL, IDSL, HDSL2, and SHDSL.⁵⁰ SBC notes that “[e]ach linecard slot is ‘universal’ in that it can accept (almost) any NGDLC linecard.”⁵¹

114. Ultimately, a competitive market will demand full interoperability by manufacturers of DLCs and cards. Such interoperability is not technically prohibitive or unusual in the . One telling example is Alcatel. Prior to the purchase of DSC Communications Corporation (previous manufacturer of the Litespan DLCs) in September of 1998, Alcatel worked with DSC to make their own DLC cards compatible with the Litespan equipment. True interoperability is a simple matter of access to layers and sufficiently open standards so that carriers can control their own networks and vendors can manufacture plug-compatible cards. Such standards could be developed through industry organizations, as they routinely are in other industries, such as the manufacturing of computers and modem equipment.

115. The capability and capacity of the DLC line cards has improved dramatically, just within the past few years. For example, originally DLC cards were capable of only serving two end-users, now vendors routinely sell cards with the capacity to serve six or eight end-users. ILEC and CLEC providers have both taken advantage of this efficiency trend. By the end of year 2000, Alcatel will be marketing DLC DSL line cards with the ability to serve up to 24 end users. Though SBC currently limits CLECs to reselling its ADSL through purchase of the Broadband Service offering, numerous other DSL technologies are either currently available from manufacturers or planned for production in the near future.⁵² As the economy repeatedly proves, consumer demand will ensure, and likely incentivize, the development of the DSL line cards for the remaining DSL services. Any limitations or inefficiencies currently hindering the

⁵⁰ Letter from Marian Dyer, Vice President – Federal Regulatory, SBC Communications, Inc., to Magalie Roman Salas, Secretary, FCC (May 25, 2000)(“*Vendor Availability on DSL Services in NGDLC*”). (See Attachment I.)

⁵¹ Technical Reference Notice for Broadband Service Phase 1 at 15.

capability of DLC DSL line cards will merely require the redesign of the DSLAM functionality on the cards.

116. CLECs requires access to the same OSS functionalities that the ILECs can access to provide its services. An important feature of NGDLC is the embedded operational communications channel, which permits remote telemetry to each RT site via a partitioned, segregated interface. Using this channel, a complete inventory of line cards located at each RT can be remotely obtained by serial number and type. For instance, the element manager in Alcatel's Litespan DLC is capable of remotely accessing, interrogating and provisioning all hardware and software channel unit settings and features; can manage all alarms, facility performance remotely; and works with the ILECs' legacy OSS.⁵² To allow for placement of line cards in the RTs, CLECs must also have remote ability to monitor the alarm telemetry and to upgrade the features and functionality of the software on the DLC DSL cards on a partitioned basis per card for each carrier.

117. Management of the specific CLECs' equipment vis-à-vis the ILEC OSS must be completely understood, to ensure sound business decisions. For example, any Quality of Service guarantee rendered by CLECs to their customer base, could be affected by the element management system of the ILEC, and thus those arrangements need to be completely spelled out and agreed upon. In essence, CLECs must be able to see what is happening on the lines being used to serve their customers without having to go through an ILEC.

118. To make this possible the software used in the element manager must be programmed to allow this type of access by the carriers, CLECs and ILECs alike. These element management systems ("EMS") are only now being developed to manage and monitor the

⁵²

Vendor Availability on DSL Services in NGDLC.

equipment for the NGDLC network architectures.⁵⁴ As Copper Mountain noted at the FCC Forum on DLC, the issue with effectively developing a network management system exists whether all the cards are integrated and owned by the ILECs, or whether all the CLECs own their own DSL line cards.⁵⁵ SBC, however, has explicitly refused to “provide CLECs partitioned access to the CBX-500 Network Management System.”⁵⁶

119. No negotiated resolution to the problems associated with access to fiber-fed loops is currently available. The ILECs continue to refuse to discuss the “plug and play” option with CLECs, offering only RT collocation on a shelf-by-shelf basis.⁵⁷ Rhythms has specifically asked SBC to take the opportunity to trial the “plug and play” option in conjunction with SBC’s trialing of its Broadband Service offering.⁵⁸ SBC refused.⁵⁹ In recent contract negotiations with SBC for a line sharing amendment, Rhythms requested language in the amendment to address the provisioning of loops served through the NGDLC architecture, in turn SBC merely offered its proposed contract language for its Broadband Service.

DSL DEPLOYMENT AT THE RT AND USE OF SPARE COPPER

120. Much discussion has been undertaken to ensure CLEC access to existing copper loops running alongside fiber feeder to the RTs. In Rhythms’ view, access to unused copper provides only a partial solution for two key reasons. First, existing copper loops that parallel

⁵³ Integrated ADSL in the Litespan Access Platform <http://www.usa.alcatel.com/telecom/access/lis_adsl.htm>; Major Features of the Litespan-2000 <<http://www.dsccc.com>>.

⁵⁴ Technical Reference Notice for Broadband Service Phase 1 at 2; *SBC Pronto/CLEC Collaborative Issues Log*, Item 1.2.

⁵⁵ FCC DLC Forum, Tr. 75-76.

⁵⁶ *SBC Pronto/CLEC Collaborative Issues Log*, Item 8.32.

⁵⁷ BellSouth RT Collocation Amendment, §3.4; SBC Draft Overview of Remote Terminal Collocation at 2.

⁵⁸ News Release: *SBC to Start Offering DSL Service From Neighborhood Broadband Gateways Deployed Through Project Pronto* (August 22, 2000).

⁵⁹ *SBC PRONTO CLEC FRIENDLY USER TRIAL - ACTION LOG*, Item 1 (Oct. 4, 2000) (See Attachment J).

fiber-fed loops may be rendered unsuitable for provision of such key services as ADSL and line sharing. Second, once fiber is deployed, the copper facilities previously used are likely to no longer be intact or available.

121. When a given geographic area is served by both a copper feeder cable and a fiber/DLC with a common distribution cable configuration, an existing or future ADSL service originating in an all copper scenario (copper feeder and copper distribution cable) to an end user may be encumbered by a new ADSL service originating from an RT to another user in the same distribution cable sheath. ADSL is asymmetric, generating a signal at the DSLAM in the downstream direction that attenuates as it reaches the end user. Conversely, the normal ADSL upstream signal is strongest nearest the end user and weakest near the DSLAM. As the signal weakens it is more susceptible to interference from signals with higher energy out in the loop plant.⁶⁰ ADSL is also a FEXT limited system, which means that the asymmetrical signal does not cause interference to itself as long as the collocated transmitters are equal in signal energy.

122. Because the ADSL upstream and downstream signals are transmitted over different frequencies, they do not interfere with one another. The difference in signal levels cause the interference. For example, the copper cable signal would have attenuated by the time it reached the distribution cable, where it would be joined by the strong signal generated from the RT location. Only signals generated out in the loop plant, such as repeatered HDSL/HDSL2/T1 and remote deployed ADSL have the disturbing capability of rendering the CO-based ADSL under 16 kilofeet to become inoperable due to crosstalk interference.

123. As a result, it is simply not feasible to run ADSL on parallel copper loops once a DSLAM has been deployed in an RT. Only ADSL—the primary technology used for line

⁶⁰ This is the basis of the industry standard practice that prohibit reverse ADSL transmission where the downstream signal is transmitted from the customer end of the cable.

sharing—is affected. Accordingly, many existing customers' service will be at risk as ILECs press DLC further out of their networks. Further, all customers beyond the RT will only be able to receive ADSL—or linesharing—if their provider has access to the RT. The magnitude and consequences on competition of this problem DSL providers are having is therefore difficult to overstate.

124. Unlike ADSL which is a FEXT limited system, other forms of DSL, such as SDSL or HDSL are self-NEXT limited, and thus relatively unaffected by remote location deployment. Nor do the RT-based DSLAMs affect voice service or any other advanced services transmitted over the copper. Thus, those services could be run on parallel copper lines all the way from the CO without any interference from RT-based ADSL services.

125. Rhythms, along with many other incumbent and competitive carriers, has been participating in the T1E1.4 Working Group that has determined acceptable interference levels for ADSL. Rhythms proposes that placement of DSLAMs in remote terminals need to be spectrally compatible with CO-based ADSL when those services could be run on parallel copper lines all the way from the CO. Since there seems to be no practical way to manage the loop plant line-by-line, the most practical way to govern the RT deployment compatibility issue is that the services out of the RT must meet the industry standard for spectral compatibility for all customers within 15.5 kilofeet radius of the CO, the distance which carriers have commercially provided ADSL service over full copper loops and the distance specified in the work performed by T1E1.4. However, once competitive deployment of DSL from through the remote terminal is the norm, these requirements can be revisited.

126. Some may suggest that once a remote terminal is functional with DSLAMs, the affected equipment located in the CO (or first RT if a second RT is positioned further out than

the first) should just be moved out. Several factors make this option untenable. De-installing and re-installing equipment and customers served by that equipment is extremely expensive and time-consuming while producing little to no benefit for the end user. In addition, the smaller the remote terminals get, the less chance there will be that there is sufficient, indeed any, space in the RT to re-install that equipment.

127. With respect to spare copper it is also worth noting that the typical ILEC practice—once fiber is installed—is to re-use the existing copper in the feeder plant to serve customers between the CO and the RT. Consequently, the “old” copper loop to a customer beyond the RT no longer exists: the distribution portion (which was 1/2 of the copper loop) of the loop is now used to connect the customer to the RT, which in turn is connected by the fiber to the CO. The copper feeder portion of the loop is recycled to another customer closer to the CO. Thus, the copper loop no longer exists but the copper is still in the ground. Because of this reality, SBC will be able to keep its commitment to leave copper in the ground, while still refusing to provide CLECs with a copper loop.

Declaration

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Executed on October 10, 2000

Martin Garrity / S.M.B.
Martin Garrity

Declaration

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Executed on October 10, 2000


Tom Stumbaugh

Declaration

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Executed on October 10, 2000

A handwritten signature in cursive script, appearing to read "Rob Williams", written over a horizontal line.

Rob Williams

Declaration

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Executed on October 10, 2000


David Reilly

BellSouth Remote Site Collocation
Draft – For Negotiation Purposes

Attachment____
Page 1

Remote Site Physical Collocation

BELLSOUTH

REMOTE SITE PHYSICAL COLLOCATION

1. Scope of Attachment

- 1.1 Scope of Attachment. The rates, terms, and conditions contained within this Attachment shall only apply when CLEC-1 is occupying the Remote Collocation Space as a sole occupant or as a Host within a Remote Site Location pursuant to Section 4.

All the negotiated rates, terms and conditions set forth in this Attachment pertain to Remote Site Collocation and the provisioning of Remote Collocation Space.

- 1.2 Right to occupy. BellSouth shall offer to CLEC-1 Remote Site Collocation on rates, terms, and conditions that are just, reasonable, non-discriminatory and consistent with the rules of the Federal Communications Commission ("FCC"). Subject to the rates, terms, and conditions of this Attachment, BellSouth hereby grants to CLEC-1 a right to occupy that certain area designated by BellSouth within a BellSouth Remote Site Location, of a size which is specified by CLEC-1 and agreed to by BellSouth (hereinafter "Remote Collocation Space"). BellSouth Remote Site Locations include cabinets, huts, and controlled environmental vaults owned or leased by BellSouth that house BellSouth Network Facilities. To the extent this Attachment does not include all the necessary rates, terms and conditions for other BellSouth remote locations other than cabinets, huts and controlled environmental vaults, the Parties will negotiate said rates, terms, and conditions at the request for Remote Site collocation at BellSouth remote locations other than those specified above. The size specified by CLEC-1 may contemplate a request for space sufficient to accommodate CLEC-1's growth within a two year period.

- 1.3 Third Party Property. If the Premises, or the property on which it is located, is leased by BellSouth from a Third Party or otherwise controlled by a Third Party, special considerations and intervals may apply in addition to the terms and conditions of this Agreement. Additionally, where BellSouth notifies CLEC-1 that BellSouth's agreement with a Third Party does not grant BellSouth the ability to provide access and use rights to others, upon CLEC-1's request, BellSouth will use its best efforts to obtain the owner's consent and to otherwise secure such rights for CLEC-1. CLEC-1 agrees to reimburse BellSouth for the reasonable and demonstrable costs incurred by BellSouth in obtaining such rights for CLEC-1. In cases where a Third Party agreement does not grant BellSouth the right to provide access and use rights to others as contemplated by this Agreement and

BellSouth, despite its best efforts, is unable to secure such access and use rights for CLEC-1 as above, CLEC-1 shall be responsible for obtaining such permission to access and use such property . BellSouth shall cooperate with CLEC-1 in obtaining such permission.

1.4 Space Reclamation. In the event of space exhaust within a Remote Site Location, BellSouth may include in its documentation for the Petition for Waiver filing any vacant space in the Remote Site Location. CLEC-1 will be responsible for any justification of vacant space within its Remote Collocation Space, if such justification is required by the appropriate state commission.

1.5 Use of Space. CLEC-1 shall use the Remote Collocation Space for the purposes of installing, maintaining and operating CLEC-1's equipment (to include testing and monitoring equipment) that is directly related to and thus necessary, required or indispensable for interconnection with BellSouth services and facilities, including access to unbundled network elements, for the provision of telecommunications services. In addition to, and not in lieu of, interconnection to BellSouth services and facilities, CLEC-1 may connect to other interconnectors within the designated BellSouth Remote Site Location (including to its other virtual or physical collocated arrangements) through DS1 co-Carrier cross connect facilities where an existing cable rack structure is in place and has sufficient capacity to accommodate the co-Carrier cross connection requested. Such co-carrier cross connect must be performed by a BellSouth Certified Supplier. The Remote Collocation Space may be used for no other purposes except as specifically described herein or authorized in writing by BellSouth.

1.6 Rates and charges. CLEC-1 agrees to pay the rates and charges identified in Exhibit A attached hereto.

2. Space Notification

2.1 Availability of Space. Upon submission of an Application pursuant to Section 6, BellSouth will permit CLEC-1 to physically collocate, pursuant to the terms of this Attachment, at any BellSouth Remote Site Location, unless BellSouth has determined that there is no space available due to space limitations or that Remote Site collocation is not practical for technical reasons. BellSouth will respond to an Application within ten (10) business days as to whether space is available or not available within a BellSouth Remote Site Location. In the event space is not immediately available at a Remote Site Location, BellSouth reserves the right to make additional space available, in which case the conditions in Section 6.5.2 shall apply, or BellSouth may elect to deny space in accordance with this section in which case virtual or adjacent collocation options may be available.

If the amount of space requested is not available, BellSouth will notify CLEC-1 of the amount of space that is available.

2.2 Reporting. Upon request from CLEC-1, BellSouth will provide a written report ("Space Availability Report") specifying the amount of Remote Collocation Space available at the Remote Site Location requested, the number of collocators present at the Remote Site Location, any modifications in the use of the space since the last report on the Remote Site Location requested and the measures BellSouth is taking to make additional space available for collocation arrangements.

2.2.1 The request from CLEC-1 for a Space Availability Report must be written and must include the Common Language Location Identification ("CLLI") code for both the Remote Site Location and the serving central office. Such information regarding the CLLI code for the serving central offices located in the National Exchange Carriers Association (NECA) Tariff FCC No. 4 and for the Remote Site Location may be obtained from Telecordia Technologies.

2.2.2 BellSouth will respond to a request for a Space Availability Report for a particular Remote Site Location within ten (10) business days of receipt of such request. BellSouth will make best efforts to respond in ten (10) business days to such a request when the request includes from two (2) to five (5) Remote Site Locations within the same state. The response time for requests of more than five (5) Remote Site Locations shall be negotiated between the Parties. If BellSouth cannot meet the ten business day response time, BellSouth shall notify CLEC-1 and inform CLEC-1 of the time frame under which it can respond.

2.3 Denial of Application. After notifying CLEC-1 that BellSouth has no available space in the requested Remote Site Location ("Denial of Application"), BellSouth will allow CLEC-1, upon request, to tour the Remote Site Location within ten (10) business days of such Denial of Application. In order to schedule said tour within ten (10) business days, the request for a tour of the Remote Site Location must be received by BellSouth within five (5) business days of the Denial of Application.

2.4 Filing of Petition for Waiver. Upon Denial of Application BellSouth will timely file a petition with the Commission pursuant to 47 U.S.C. § 251(c)(6).

2.5 Waiting List. On a first-come, first-served basis governed by the date of receipt of an Application or Letter of Intent, BellSouth will maintain a waiting list of requesting carriers who have either received a Denial of Application or, where it is publicly known that the Remote Site Location is out of space, have submitted a Letter of Intent to collocate. BellSouth will notify the telecommunications carriers on the waiting list when space becomes available according to how much space

becomes available and the position of telecommunications carrier on said waiting list. CLEC-1 must submit an updated, complete, and correct Application to BellSouth within 30 business days or notify BellSouth in writing that CLEC-1 wants to maintain its place on the waiting list either without accepting such space or accepting an amount of space less than its original request. If CLEC-1 does not submit such an Application or notify BellSouth in writing as described above, BellSouth will offer such space to the next CLEC on the waiting list and remove CLEC-1 from the waiting list. Upon request, BellSouth will advise CLEC-1 as to its position on the list.

2.6 Public Notification. BellSouth will maintain on its Interconnection Services website a notification document that will indicate all Remote Site Locations that are without available space. BellSouth shall update such document within ten (10) business days of the Denial of Application date. BellSouth will also post a document on its Interconnection Services website that contains a general notice where space has become available in a Remote Site Location previously on the space exhaust list. BellSouth shall allocate said available space pursuant to the waiting list referenced in Section 2.5.

2.7 State Agency Procedures. Notwithstanding the foregoing, should any state or federal regulatory agency impose procedures or intervals different than procedures or intervals set forth in this section applicable to CLEC-1, whether now in effect or that become effective after execution of this Agreement, those procedures or intervals shall supersede the requirements set forth herein for all Applications submitted for the first time after the effective date thereof for that jurisdiction.

3. Collocation Options

3.1 Compliance. The parties agree to comply with all applicable federal, state, county, local and administrative laws, orders, rules, ordinances, regulations, and codes in the performance of their obligations hereunder.

3.2 Cageless. BellSouth shall allow CLEC-1 to collocate CLEC-1's equipment and facilities without requiring the construction of a cage or similar structure. BellSouth shall allow CLEC-1 to have direct access to its equipment and facilities. BellSouth shall make cageless collocation available in single rack/bay increments pursuant to Section 6. For equipment requiring special technical considerations, CLEC-1 must provide the equipment layout, including spatial dimensions for such equipment pursuant to generic requirements contained in BellCore (Telcordia) GR-63-Core and shall be responsible for constructing all special technical requirements associated with such equipment pursuant to Section 6.8 following.

Subject to space availability and technical feasibility, at CLEC-1's option, CLEC-1 may enclose its equipment.

3.3 Shared (Subleased) Collocation. CLEC-1 may allow other telecommunications carriers to share CLEC-1's Remote Site collocation arrangement pursuant to terms and conditions agreed to by CLEC-1 ("Host") and other telecommunications carriers ("Guests") and pursuant to this section, except where the BellSouth Remote Site Location is located within a leased space and BellSouth is prohibited by said lease from offering such an option or is located on property for which BellSouth holds an easement and such easement does not permit such an option. CLEC-1 shall notify BellSouth in writing upon execution of any agreement between the Host and its Guest within ten (10) business days of its execution and prior to any Firm Order. Further, such notice shall include the name of the Guest(s) and the term of the agreement, and shall contain a certification by CLEC-1 that said agreement imposes upon the Guest(s) the same terms and conditions for Remote Collocation Space as set forth in this Attachment between BellSouth and CLEC-1.

3.3.1 CLEC-1 shall be the sole interface and responsible Party to BellSouth for the purpose of submitting Applications for initial and additional equipment placements of Guest; for assessment of rates and charges contained within this Attachment; and for the purposes of ensuring that the safety and security requirements of this Attachment are fully complied with by the Guest, its employees and agents. In the event the Host and Guest jointly submit an Application, only one Application Fee will be assessed. A separate Guest Application shall require the assessment of an Application Fee, as set forth in Exhibit A. Notwithstanding the foregoing, Guest may arrange directly with BellSouth for the provision of the interconnecting facilities between BellSouth and Guest and for the provision of the services and access to unbundled network elements.

3.3.2 CLEC-1 shall indemnify and hold harmless BellSouth from any and all claims, actions, causes of action, of whatever kind or nature arising out of the presence of CLEC-1's Guests in the Remote Collocation Space except to the extent caused by BellSouth's sole negligence, gross negligence, or willful misconduct.

3.4 Adjacent Collocation. BellSouth will provide approval for adjacent Remote Site collocation arrangements ("Remote Site Adjacent Arrangement") where space within the Remote Site Location is legitimately exhausted, subject to technical feasibility, where the Remote Site Adjacent Arrangement does not interfere with access to existing or planned structures or facilities on the Remote Site Location property and where permitted by zoning and other applicable state and local regulations. The Remote Site Adjacent Arrangement shall be constructed or

procured by CLEC-1 and in conformance with BellSouth's design and construction specifications. Further, CLEC-1 shall construct, procure, maintain and operate said Remote Site Adjacent Arrangement(s) pursuant to all of the terms and conditions set forth in this Attachment. Rates shall be negotiated at the time of the request for the Remote Site Adjacent Arrangement.

3.4.1 Should CLEC-1 elect such an option, CLEC-1 must arrange with a BellSouth Certified Contractor to construct a Remote Site Adjacent Arrangement structure in accordance with BellSouth's guidelines and specifications. BellSouth will provide guidelines and specifications upon request. Where local building codes require enclosure specifications more stringent than BellSouth's standard specification, CLEC-1 and CLEC-1's BellSouth Certified Contractor must comply with local building code requirements. CLEC-1's BellSouth Certified Contractor shall be responsible for filing and receiving any and all necessary zoning, permits and/or licenses for such construction. CLEC-1's BellSouth Certified Contractor shall bill CLEC-1 directly for all work performed for CLEC-1 pursuant to this Attachment and BellSouth shall have no liability for nor responsibility to pay such charges imposed by the BellSouth Certified Contractor. CLEC-1 must provide the local BellSouth Remote Site Location contact with two cards, keys or other access device used to enter the locked enclosure. Except in cases of emergency, BellSouth shall not access CLEC-1's locked enclosure prior to notifying CLEC-1.

3.4.2 BellSouth maintains the right to review CLEC-1's plans and specifications prior to construction of a Remote Site Adjacent Arrangement(s). BellSouth may inspect the Remote Site Adjacent Arrangement(s) following construction and prior to the Commencement Date, as defined in Section 4.1 following, to ensure the design and construction comply with BellSouth's guidelines and specifications. BellSouth may require CLEC-1, at CLEC-1's sole cost, to correct any deviations from BellSouth's guidelines and specifications found during such inspection(s), up to and including removal of the Remote Site Adjacent Arrangement, within five (5) business days of BellSouth's inspection, unless the Parties mutually agree to an alternative time frame.

3.4.3 CLEC-1 shall provide a concrete pad, the structure housing the arrangement, heating/ventilation/air conditioning ("HVAC"), lighting, and all facilities that connect the structure (i.e. racking, conduits, etc.) to the BellSouth point of interconnection. At CLEC-1's option, and where the local authority having jurisdiction permits, BellSouth shall provide an AC power source and access to physical collocation services and facilities subject to the same nondiscriminatory requirements as applicable to any other physical collocation arrangement. CLEC-1's BellSouth Certified Contractor shall be responsible for filing and receiving any and all necessary zoning, permits and/or licenses for such arrangement.

3.4.4 BellSouth shall allow Shared (Subleased) Caged Collocation within an Remote Site Adjacent Arrangement pursuant to the terms and conditions set forth in Section 3.3 preceding.

4. Occupancy

4.1 Commencement Date. The "Commencement Date" shall be the day CLEC-1's equipment becomes operational as described in Article 4.2, following.

4.2 Occupancy. BellSouth will notify CLEC-1 in writing that the Remote Collocation Space is ready for occupancy. CLEC-1 must notify BellSouth in writing that collocation equipment installation is complete and is operational with BellSouth's network. BellSouth may, at its option, not accept orders for interconnected service until receipt of such notice. For purposes of this paragraph, CLEC-1's telecommunications equipment will be deemed operational when connected to BellSouth's network for the purpose of service provision.

4.3 Termination. Except where otherwise agreed to by the Parties, CLEC-1 may terminate occupancy in a particular Remote Collocation Space upon thirty (30) business days prior written notice to BellSouth. Upon termination of such occupancy, CLEC-1 at its expense shall remove its equipment and other property from the Remote Collocation Space. CLEC-1 shall have thirty (30) business days from the termination date to complete such removal, including the removal of all equipment and facilities of CLEC-1's Guests; provided, however, that CLEC-1 shall continue payment of monthly fees to BellSouth until such date as CLEC-1 has fully vacated the Remote Collocation Space. Should CLEC-1 or CLEC-1's Guest fail to vacate the Remote Collocation Space within thirty (30) business days from the termination date, BellSouth shall have the right to remove the equipment and other property of CLEC-1 or CLEC-1's Guest at CLEC-1's expense and with no liability for damage or injury to CLEC-1 or CLEC-1's Guest's property unless caused by the gross negligence or intentional misconduct of BellSouth. Upon termination of occupancy with respect to a Remote Collocation Space, CLEC-1 shall surrender such Remote Collocation Space to BellSouth in the same condition as when first occupied by the CLEC-1 except for ordinary wear and tear unless otherwise agreed to by the Parties. CLEC-1 shall be responsible for the cost of removing any enclosure, together with all support structures (e.g., racking, conduits), of a Remote Site Adjacent Arrangement at the termination of occupancy and restoring the grounds to their original condition.

5. Use of Remote Collocation Space

5.1 Equipment Type. BellSouth permits the collocation of any type of equipment that is directly related to and thus necessary, required or indispensable for